BLM

U.S. Department of the Interior
Bureau of Land Management

Environmental Assessment

Willow Creek Abandoned Mine Reclamation Project
DOI-BLM-UT-G010–2015–0125–EA

PREPARING OFFICE

U.S. Department of the Interior
Bureau of Land Management
Vernal Field Office
170 South 500 East
Vernal, UT 84078
435–781–4400
435–781–4410

Environmental Assessment
Willow Creek Abandoned Mine Reclamation Project
DOI-BLM-UT-G010–2015–0125–EA

Prepared by
U.S. Department of the Interior
Bureau of Land Management
Township 9 South, Range 19 East, Section 36, SENE, Salt Lake Base & Meridian, Uintah County, Utah
Vernal Field Office
Vernal, Utah

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Finding of No Significant Impact

Based on the analysis of potential environmental impacts (per Environmental Assessment DOI-BLM-UT-G010–2015–0125–EA), I have determined that the proposed action with the mitigation measures described below will not have any significant impacts on the environment and an environmental impact statement is not required.

Mitigation Measures:

1. [Measure 1]
2. [Measure 2]
3. [Measure 3]

Signatures:

Recommended by:

Richard Goshen — Date
Geologist

Approved by:

Jerry Kenczka — Date
Assistant Field Manager,
Lands and Minerals

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DECISION RECORD

Decision

It is my decision to approve and authorize *reclamation of the Willow Creek abandoned Gilsonite mine shaft*, and to proceed as set out in the Proposed Action of the Environmental Assessment (DOI-BLM-UT-G010–2015–0125–EA) subject to the applicant committed measures, stipulations, compliance and monitoring as described in the Statement of Work. This alternative is hereafter called the Selected Alternative. This decision applies to BLM-administered lands only.

I have determined that authorizing this selected alternative is in the public interest, and will minimize impacts so that no undue disturbance will occur.

Compliance, Monitoring, Stipulations

Compliance and monitoring checks will be conducted in accordance with BLM Regulations.

Plan Conformance and Consistency

The proposed action and alternatives have been reviewed and found to be in conformance with one or more of the following BLM Land Use Plan and the associated decision(s):

The selected alternative has been reviewed, and found to be in conformance with the 2008 Vernal Field Office Record of Decision and Approved Resource Management Plan (RMP) as well as ongoing management programs and actions. One of the stated objectives of the RMP in reference to Abandoned Mine Lands is "…to protect and safeguard human health, prevent/restore environmental damage and to limit the BLM's liability" (Appendix Q, page 3). It has been determined that the proposed action and alternative(s) would not conflict with other decisions throughout the plan..

Compliance with NEPA:

This EA was prepared by the BLM in accordance with the National Environmental Policy Act (NEPA) of 1969 and in compliance with all applicable regulations and laws passed subsequently, including the President's Council on Environmental Quality regulations, and the U.S. Department of Interior requirements and guidelines listed in the BLM Manual Handbook H-1790-1. This EA assesses the environmental effects of the Proposed Action and the No Action Alternative.

Rationale / Authorities / Public Involvement

The decision to authorize close and reclaim the abandoned Gilsonite mine shaft has been made in consideration of the environmental impacts of the proposed action. This decision has been made after considering impacts to resources within the Vernal Field Office.

Identification of issue(s) for this assessment was accomplished by considering any resources that could be affected by implementation of one of the alternatives.

Issues identified by BLM Specialists are documented in Appendix A Interdisciplinary Team Checklist.

Alternatives Considered

Alternative A: Proposed Action

Fill the abandoned Gilsonite mine shaft with on-site material (including rock, soil and mine refuse) via a contractor.

Alternative B: Fence Installation

Install a fence around the shaft opening.

Alternative C: No Action

The No Action Alternative is considered and analyzed to provide a baseline for comparison of the impacts of the proposed action. Under the No Action Alternative, the BLM would not abandon the open mine shaft and would not cause any new surface disturbance. However, the safety hazard and BLM liability would remain.

The authority for this decision is pursuant to Section 21 of the Mineral Leasing Act of 1920, as amended (30 U.S.C. 195)

The proposed action was posted to the Utah BLM's Environmental Notification Bulletin Board on 5/1/2012 and reposted to the public BLM E-Planning website with its assigned NEPA number on 07/09/2015. To date, no questions or comments have been received. A public comment period was not offered due to the proposed action being public safety issue.

Appeal or Protest Opportunities:

Protest/Appeal Language: This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4 and the enclosed Form 1842-1. If an appeal is taken, your notice of appeal must be filed in this office (at the above address) within 30 days from receipt of this decision. The appellant has the burden of showing that the decision appealed from is in error.

If you wish to file a petition (request) pursuant to regulation 43 CFR 2801.10 or 43 CFR 2881.10 for a stay (suspension) of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below.

Copies of the notice of appeal and petition for a stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

(1) The relative harm to the parties if the stay is granted or denied, (2) The likelihood of the appellant's success on the merits,

(3) The likelihood of immediate and irreparable harm if the stay is not granted, and

(4) Whether the public interest favors granting the stay.

Authorizing Official:

Jerry Kenczka — Date
Assistant Field Manager, Lands and Minerals

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Acronyms and Abbreviations

APE Area of Potential Effect

BLM Bureau of Land Management

EA Environmental Assessment

NEPA National Environmental Policy Act

RMP Resource Management Plan

ROD Record of Decision

SHPO State Historic Preservation Office

VFO Vernal Field Office

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Chapter 1. Introduction

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1.1. Introduction

This Environmental Assessment (EA) has been prepared to disclose and analyze the environmental consequences of Willow Creek Abandoned Mine Reclamation Project as proposed by the Bureau of Land Management's (BLM) Vernal Field Office (VFO). The EA is a site specific analysis of potential impacts that could result with the implementation of this proposed action or the alternative to the proposed action. The EA assists the BLM in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any "significant" impacts could result from the analyzed actions. "Significance" is defined by NEPA and is found in regulation 40 CFR 1508.27. If no evidence of significant impacts are found in the EA, a Decision Record may be signed for the EA approving the selected alternative, whether the proposed action or the alternative.

1.1.1. Background:

In 2012, the Vernal Field Office (VFO) discovered an abandoned mine shaft on Federally administered lands in the SE¼NE¼ of Section 36, Township 9 South, Range 19 East, Salt Lake Base and Meridian, Uintah County, Utah (608799 mE 4427606 mN UTM WGS84)(Figure 1.1). Field inspections indicated that the shaft was sunk for the purpose of Gilsonite exploration, however, no evidence of production was observed. The responsible party and further history are unknown beyond the fact that the lands were formerly under the jurisdiction of the State of Utah Institutional Trust Lands Administration and that the land and minerals were reacquired by the Federal Government in a 1984 land exchange. The shaft is an estimated 40 feet in depth and it's opening is partially covered by unstable wooden timbers.

1.1.2. Title, EA number, and type of project:

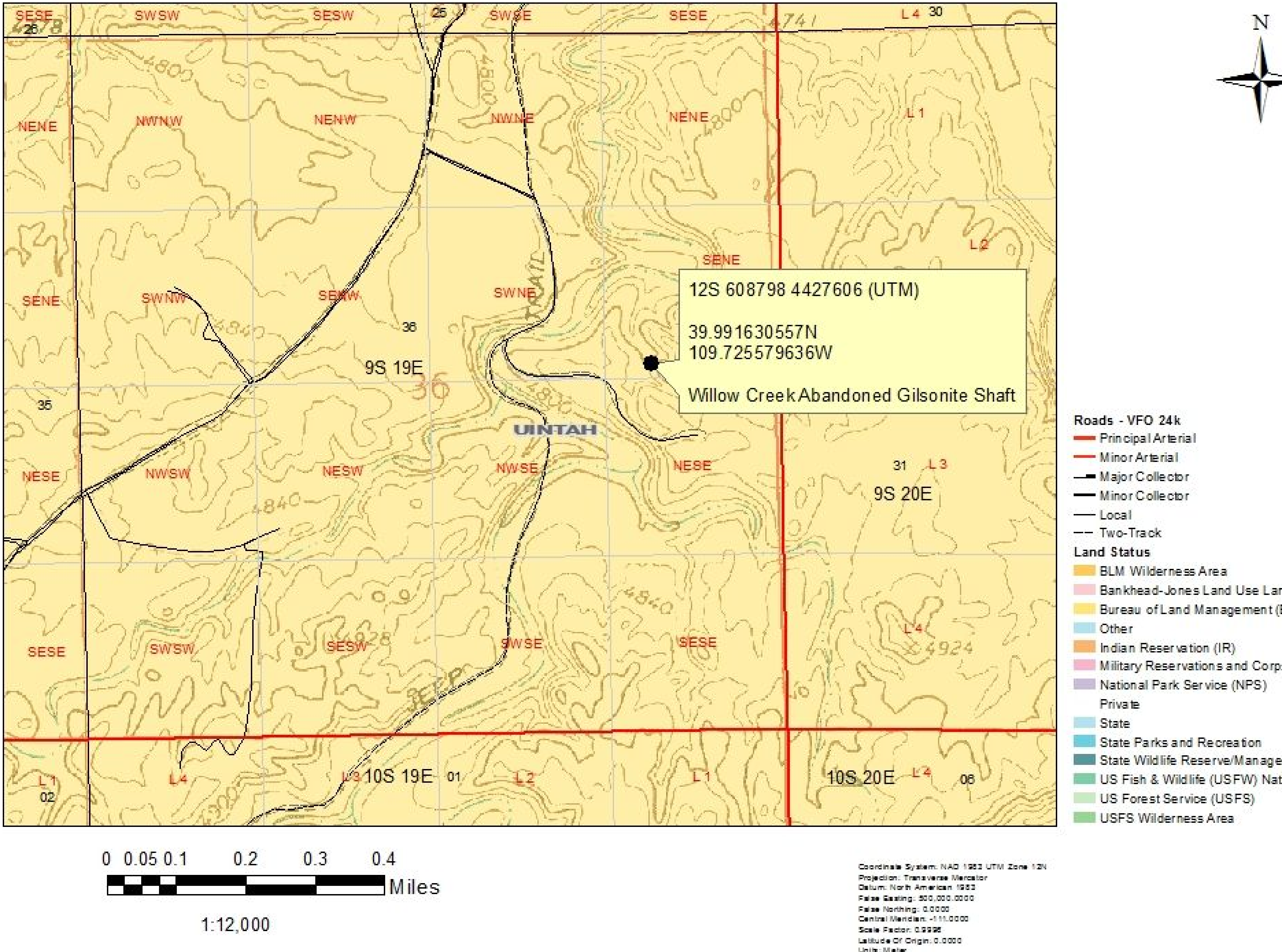
Title: Willow Creek Abandoned Mine Reclamation Project

NEPA#: DOI-BLM-UT-G010–2015–0125–EA

Project Type: Environmental Assessment

1.1.3. Location of Proposed Action

The proposed project area is located in SE¼NE¼ of Section 36, Township 9 South, Range 19 East, Salt Lake Base and Meridian, Uintah County, Utah. See Figure 1.1


12S 608798 4427606 (UTM)
39.991630557N
109.725579636W
Willow Creek Abandoned Gilsonite Shaft
9S 19E
9S 20E
10S 19E
10S 20E
UINTAH
TRAIL
JEEP
N
Roads - VFO 24k
Principal Arterial
Minor Arterial
Major Collector
Minor Collector
Local
Two-Track
Land Status
BLM Wilderness Area
Bankhead-Jones Land Use Lar
Bureau of Land Management (
Other
Indian Reservation (IR)
Military Reservations and Corp
National Park Service (NPS)
Private
State
State Parks and Recreation
State Wildlife Reserve/Manage
US Fish & Wildlife (USFW) Nat
US Forest Service (USFS)
USFS Wilderness Area
0 0.05 0.1 0.2 0.3 0.4
Miles
1:12,000
Coordinate System: NAD 1983 UTM Zone 12N
Projection: Transverse Mercator
Datum: North American 1983
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: -111.0000
Scale Factor: 0.9996
Latitude Of Origin: 0.0000
Units: Meter

1.1.4. Name and Location of Preparing Office:

Vernal Field Office

170 South 500 East

Vernal, UT 84078

(435) 781–4400

1.2. Purpose and Need for Action:

The BLM's purpose for the project is to consider closure of an open, abandoned Gilsonite shaft in a manner that provides for elimination of an existing safety hazard, while mitigating other resource values that is consistent with state, local and tribal plans to the extent allowed under federal laws, regulations, policies, and plans.

1.3. Scoping, Public Involvement and Issues:

During preparation of the EA, public involvement consisted of posting the proposal on the Utah BLM's Environmental Notification Bulletin Board on 5/1/2012 and reposted on the Eplanning NEPA Register on 07/09/2015. *No public comment or inquiries were received.* The proposed action was reviewed by an interdisciplinary team of BLM resource specialists. For a list of all resources considered, refer to Appendix A

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Chapter 2. Proposed Action and Alternatives

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2.1. Proposed Action:

The proposed action is to fill the abandoned mine shaft with on-site material (including rock, soil and mine refuse) via a contractor. Wooden timbers would first be removed from over top of the open shaft to eliminate the possibility of the material "bridging" and leaving a void below that could eventually collapse. Using a backhoe or trackhoe, rock, soil and mine refuse at the site would then be used to fill in the open shaft. Once filled in, rock and dirt will be piled on top of the shaft location to a height of 3-4 feet to account for settlement. A small diversion ditch will be dug up slope of the shaft to prevent erosion from reopening it. No access roads would be constructed. No water would be used. Less than 10,000 gal of chemicals (under SARA,1986) and less than the TPQ of chemicals in 40 CFR 355 would be used in association with the operations and the contractor would clean up spills of fuel, lubricants, acids or antifreeze and dispose of them properly. The contractor would also abide by any timing restrictions or avoid areas should any sensitive plants, wildlife or other resources be identified by the BLM.

The proposed action would result in approximately 3 acres of surface disturbance and all disturbed areas would be graded and reseeded once work has been completed. The Pure Live Seed (PLS) mixture used would be:

Common Name	Quantity
Indian Ricegrass (Nezpar)	3.00 lbs/acre
Sandberg Bluegrass	1.00 lbs/acre
Bottlebrush Squirreltail	1.00 lbs/acre
Great Basin Wildrye	0.50 lbs/acre
Crested Wheatgrass (Ephraim)	1.00 lbs/acre
Shadscale	1.50 lbs/acre
Fourwing Saltbrush	1.00 lbs/acre
Total	9.00 lbs/acre

Monitoring of the reclaimed project area would be completed annually during the growing season and actions to ensure reclamation success would be taken as needed. During the first two growing seasons a visual methodology would be used to determine the success of the reclamation activities.

2.2. Alternative Action A (Fence Installation)

Alternative Action A is to install fencing around the shaft opening. Although fencing would involve very minimal surface disturbance, there are drawbacks. One, fencing a shaft is considered a temporary closure method and is used only when access may be necessary. Two, fences are used in permanent closures only as secondary protection, such as around a cap or gate. Considering the previous, the fencing alternative may not address the purpose and need for the action (i.e. safety hazard and BLM liability). In addition, fencing requires continued inspection and maintenance.

2.3. No Action Alternative

The No Action Alternative is considered and analyzed to provide a baseline for comparison of the impacts of the proposed action. Under the No Action Alternative, the BLM would not abandon the open mine shaft and would not cause any new surface disturbance. However, the safety hazard and BLM liability would remain.

2.4. Alternatives Considered but not Analyzed in Detail

Another alternative would be to cap the shaft with reinforced concrete, however, this was ruled out based on the ability to close the opening via fill (BLM's preferred method) and the greater risk of failure of structures such as caps, gates, fences, plugs and barricades.

Historically, Gilsonite shafts have not been filled because of (1) their significant depth (hundreds of feet), (2) the large lateral extent along the vein mined and (3) the high cost of transporting materials to remote sites. In this case the shaft does not exceed 40 feet in depth, there is no lateral mining apparent and there is sufficient on-site material to fill the shaft.

2.5. Conformance

The proposed action and alternatives are in conformance with the 2008 Vernal Field Office Record of Decision and Approved Resource Management Plan (RMP) as well as ongoing management programs and actions. One of the stated objectives of the RMP in reference to Abandoned Mine Lands is "…to protect and safeguard human health, prevent/restore environmental damage and to limit the BLM's liability" (Appendix Q, page 3). It has been determined that the proposed action and alternative(s) would not conflict with other decisions throughout the plan..

The Proposed Action, Alternative A (Fence Installation) and No Action Alternative are also consistent with all applicable Federal, State and local laws and regulations including the following:

- Federal Land Policy and Management Act (FLPMA) of 1976 (43 U.S.C. 1701 et seq.).
- Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (42 U.S.C. 9601 et seq.) and National Contingency Plan (NCP) (40 CFR Part 300).
- General Mining Law of 1872, as amended (30 U.S.C. 21. et seq.).
- Surface Resource Act of 1955 (30 U.S.C. 611-615).
- Section 106 of the National Historic Preservation Act of 1966 (as amended).
- National Environmental Policy Act of 1969 (as amended).
- BLM Handbook 3720.
- Surface Mining Control and Reclamation Act (SMCRA) Title IV.

Chapter 3. Affected Environment:

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[Enter appropriate Affected Environment descriptions here.]

3.1. Soil and Vegetation

Soils

The proposed project takes place within soils mapped as Casmos-Cadrina Badland complex according to NRCS soil survey data (NRCS WSS 2015). These soils are typically loamy, to channery loam all the way to bedrock with some clay complexes (Badlands) showing up as well. Depth to bedrock is typically 5–20 inches, they are well drained, high runoff potential because of the nature of channery loams, and can be slightly saline. These soils typically derive from slope alluviums over residuum derived from sandstone, siltstone, and shale's. Approximately 3 acres of new soil disturbance would occur during project activities and these areas would remain disturbed until reclamation is successful. Soils would be re-contoured and reseeded during reclamation activities.

Vegetation

3.2. Plants: Threatened, Endangered, Candidate and Proposed

Uinta Basin hookless cactus (*Sclerocactus wetlandicus*)

Uinta Basin hookless cactus is a perennial herb and a member of the cactus family. It is federally listed as threatened and is endemic to the Uinta Basin. It consists of a perennial succulent shoot, solitary or rarely branching, globose, ovoid or cylindrical. Individuals are usually 3 to 9 centimeters in diameter and 4 to 12 centimeters. Each spine cluster, areoles, usually consists of one large (15 to 29 millimeters) central spine, three to four lateral central spines, and and six to ten radial spines. From late April to May, Uinta Basin hookless cactus produces 2.5 to 5-centimeter high pink to violet flowers.

The ecological amplitude of Uinta Basin hookless cactus is wide, being found from clay badlands up to the pinyon-juniper habitat. The preferred habitat occurs on river benches, valley slopes, and rolling hills consisting of xeric, fine textured, clay soils, derived from the Duchesne River, Green River, Mancos, and Uinta formations, overlain with a pavement of large, smooth, rounded cobble. The typical plant community in Uinta Basin hookless cactus habitat is the salt desert shrub community.

The proposed project is located entirely within an area that the US Fish and Wildlife Service (USFWS) has identified as being potential habitat Uinta Basin hookless cactus. The project is not located within a Core Conservation Area (CCA) for the species. The Project Area was surveyed on July 19, 2012. A clearance survey was conducted on 20.6 acres, and suitable habitat was identified for *S. wetlandicus*, including a cobbly knoll and low relief areas covered with a layer of flat surface rock within the main wash. During the survey, four discreet groups of the species representing thirteen cacti individuals were identified within the survey area. An additional six groups of cactus representing thirteen cacti individuals (twelve living individuals) were identified just beyond the northeast portion of the survey area. The nearest documented occurrence is located approximately 168 feet from the project.

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Chapter 4. Environmental Effects:

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[Describe the environmental affects here.]

4.1. Proposed Action Alternative

4.1.1. Soils and Vegetation

Soils and Vegetation

Direct impacts to soils and vegetation in the following analyses are described as short-term and long-term impacts. In areas where reclamation is implemented, ground cover by herbaceous and woody species could be re-established within seven to eight years following seeding of native plant species and diligent weed control efforts. These reclaimed areas are categorized as short-term disturbance. However, it is important to note that recent BLM monitoring has documented that reclamation efforts in these high desert ecosystems for any type development have largely been unsuccessful at re-establishing soil stability, vegetation, and subsequent forage for wildlife and livestock. The ongoing drought, coupled with the area's poor soil reclamation potential, has made successful reclamation efforts challenging. BLM field inspections indicate that short-term impacts may be more accurately portrayed as long-term impacts. Thus, while the following analyses distinguish between short-term and long-term soil and vegetation losses, it is important to note that surface disturbance proposed under the alternatives could remain as long-term impacts on the landscape if reclamation efforts are not successful.

Proposed Action

The Proposed Action would disturb approximately 3 acres of soils and vegetation. Of this total, approximately 3 acres would be subject to final reclamation practices. Long-term impacts to vegetation and soils are expected if reclamation practices following the Green River Guidelines are unsuccessful. This could be up to but not limited to 25 years or until restoration is successful.

The project would contribute an estimated additional 1-2 tons/acre/year during initial work phase according to NRCS web soil survey information.. Erosion rates are higher during the first year due to disturbance during construction phases.

Direct impacts to soils include mixing of soil horizons, soil compaction, short-term loss of topsoil and site productivity, and loss of soil/topsoil through wind and water erosion. Loss of soil/topsoil in disturbed areas would reduce the re-vegetation success of seeded native species due to increased competition by annual weed species. Annual weed species are adapted to disturbed conditions, and have less stringent moisture and soil nutrient requirements than do perennial native species.

Additional direct impacts to vegetation are primarily associated with clearing of vegetation during construction. Indirect impacts to vegetation resources include the invasion and establishment of introduced, undesired plant species. The severity of these invasions would depend on the success of reclamation and re-vegetation, and the degree and success of noxious weed control efforts.

Impacts to soils and vegetation would be partially mitigated by final reclamation of disturbed areas with native vegetation and control of noxious and invasive weeds by mechanical and/or chemical treatment. Under the proposed action, final reclamation would occur on approximately 100 percent of the mining reclamation area.

4.1.2. Plants: Threatened, Endangered, Candidate and Proposed

Uinta Basin hookless cactus (*Sclerocactus wetlandicus*)

The entire Project Area is within the 2013 polygon established by U.S. Fish and Wildlife Service (USFWS) as potential habitat for *Sclerocactus wetlandicus.* Surveys were conducted on July 19, 2012 for the proposed project. A clearance survey was conducted on 20.6 acres, and suitable habitat was identified for *S. wetlandicus*, including a cobbly knoll and low relief areas covered with a layer of flat surface rock within the main wash. During the survey, four discreet groups of the species representing thirteen cacti individuals were identified within the survey area. An additional six groups of cactus representing thirteen cacti individuals (twelve living individuals) were identified just beyond the northeast portion of the survey area. The nearest documented occurrence is located approximately 168 feet from the project.

As there are plants present within the survey buffer, additional mitigation measures would be required in order to reduce the potential for direct and indirect impacts to *Sclerocactus wetlandicus* plants and habitat. As long as the proposed mitigation measures are implemented, no direct physical damage would occur to *Sclerocactus wetlandicus* individuals as a result of the Proposed Action.

Possible dispersed direct and indirect negative impacts which may result from implementation of the Proposed Action include: loss of or damage to individual plants, loss of suitable habitat, loss of forage opportunities for pollinators of the species, habitat modification by invasive weed species which may compete with individuals, accidental spray or drift of herbicides used during invasive plant control, and deposition of fugitive dust from project activities and vehicle traffic on unpaved roads, resulting in altered photosynthesis, respiration, and transpiration.

Due to these indirect and direct negative impacts the Proposed Action warrants a **"*may affect, is likely to adversely affect*"** determination for *Sclerocactus wetlandicus*.

***Mitigation for Uinta Basin hookless cactus**:*

1. If project activities do not occur within 4 years of the original survey date, new 100% clearance surveys would be required, in order to maintain compliance with current cactus survey protocols.

2. From one year of the date forward of the 100% *Sclerocactus* clearance survey for this project, spot checks would be conducted and approved for all planned disturbance areas on an annual basis. (The *S. wetlandicus* survey period is defined as anytime without snow cover prior.) Results of spot checks may require additional pre-construction plant surveys as directed by the BLM. If the Proposed Action or parts thereof have not occurred within four years of the original survey, a 100% clearance re-survey would be required prior to ground disturbing activities. Spot check reports would be reported to the BLM and the U.S. Fish and Wildlife Service.

3. Documented cacti within the 300 foot survey buffers would be flagged for avoidance during project activities.

4. A qualified biological monitor would be present during project activities to ensure that documented individual cacti are not disturbed.

5. The applicant would perform ground disturbing activities within 300 feet of documented *Sclerocactus wetlandicus* plants outside of the flowering period (April 1 through May 30).

6. The seed mix would be amended to exclude all introduced and non-native species for reclamation seeding on this project (i.e. crested wheatgrass).

7. Erosion control measures (i.e. silt fencing) would be implemented to minimize sedimentation to *Sclerocactus wetlandicus* plants and populations located downslope of proposed surface disturbing activities when working in all suitable cactus habitat.

8. Application for Pesticide Use Permit would include provisions for mechanical removal, as opposed to chemical removal, for Utah Class A, B and C noxious weeds within 50 feet of individual/populations of *Sclerocactus wetlandicus*.

Discovery Stipulation: Reinitiation of section 7 consultation with the USFWS will be sought immediately if any loss of plants or occupied habitat for Uinta Basin hookless cactus is anticipated as a result of project activities.

4.2. Alternative Action A (Fence Installation)

4.2.1. Soils and Vegetation

Alternative Action A (Fence Installation)

The Fence Installation action would not disturb the 3 acres of soils and vegetation. Some soils maybe disturbed from installation of the fence and general maintenance of the fence, however it has been deemed minimal due to the nature of the work. Long-term impacts to vegetation and soils are expected if excessive trampling happens from installation and maintenance of this fence. If trampling takes place then some kind of seeding should take place to stabilize the site.

The project would not contribute to erosion levels in the basin, since no dirt work is proposed, however, the general installation and maintenance could have impacts to erosion rates if excessive trampling is created. Erosion rates will be higher even with the fence alternative for the first year due to disturbance during construction phases. Soils turned up from general traffic and maintenance could cause increased erosion rates above the natural rate 1 ton/acre rate.

Additional direct impacts to vegetation are primarily associated with clearing of vegetation during installation of the fence and general maintenance. Indirect impacts to vegetation resources include the invasion and establishment of introduced, undesired plant species from installation and maintenance of the fence. The severity of these invasions would depend on the success of reclamation and re-vegetation, and the degree and success of noxious weed control efforts.

4.2.2. Plants: Threatened, Endangered, Candidate and Proposed

Uinta Basin hookless cactus (*Sclerocactus wetlandicus*)

Under the Fence Installation Alternative, there would be no ground disturbing activities with the exception of the installation of a fence around the mine shaft. The fence would require monitoring

and periodic maintenance, resulting in increased vehicle traffic to the site. Because surface disturbance would be reduced under this alternative, and activities would be restricted to a small area around the mine shaft, no direct impacts to plants are anticipated. However, an increase in vehicle traffic to the site may result in deposition of fugitive dust from travel over unpaved roads. In addition, vehicle traffic may result in the introduction or spread of invasive plant and/or noxious weed infestations near the site. Under this alternative, all applicable mitigation measures listed under the Proposed Action alternative would apply.

4.3. No Action Alternative

4.3.1. Plants: Threatened, Endangered, Candidate and Proposed

Uinta Basin hookless cactus (*Sclerocactus wetlandicus*)

Under the no action alternative, there would be no direct disturbance or indirect effects to threatened or endangered plant species from surface disturbing activities associated with the proposed project. Current land use trends in the area would continue, including increased industrial development, increased OHV traffic, increased recreational use for hunting, bird watching and sightseeing.

4.4. Reasonably Foreseeable Development and Cumulative Impacts Analysis

4.4.1. Plants: Threatened, Endangered, Candidate and Proposed

Uinta Basin hookless cactus (*Sclerocactus wetlandicus*)

The CIAA for Uinta Basin hookless cactus is the area delineated by the USFWS as potential habitat for the species. This area covers approximately 537,564 acres on BLM, Ute tribal, state of Utah, and privately held lands. Due to inclusions of areas of unsuitable habitat within the potential habitat area, the total acreage of suitable habitat is less than 537,564 acres. However, a complete survey of suitable habitat has not been performed and thus the amount of suitable habitat has not been quantified. Impacts to the species from past, current, and reasonably foreseeable actions may be greater or smaller than those described for the total area depending upon the exact distribution of actions relative to suitable habitat.

Within the CIAA, there are approximately 1,875 miles of roads. Past, present and reasonably foreseeable disturbance from oil and gas will affect 44,674 acres (8.3% of the CIAA), as shown in the table below. Cumulative impacts include dust impacts to plants, and plant and pollinator habitat destruction. Surface disturbance is a good indicator of the extent of these cumulative impacts.

Under the Proposed Action alternative, approximately 3 acres of new surface disturbance is proposed. Under the Fence Installation alternative, a negligible amount of surface disturbance would occur. The No Action alternative would not result in an accumulation of impacts.

Table 4.1. Cumulative Impacts Analysis for Uinta Basin Hookless Cactus

	Project Area Acreage	Surface Disturbance Analyzed	Project Area Acreage within the CIAA	Surface Disturbance within the CIAA[1]
Ongoing Field Development				
Chapita Wells-Stagecoach Area	31,872	1,735	22,678	1,235
Gasco Natural Gas Field Development EIS	236,165	3,604	77,339	1,180
Greater Deadman Bench Oil and Gas Producing Region EIS	98,785	1,239	22,444	282
Greater Natural Buttes Project EIS	162,911	8,147	97,529	4,877
North Alger Natural Gas Expansion Project EA	2,320	192	943	78
North Chapita Natural Gas Well Development Project EA	31,872	1,735	9,191	500
River Bend Unit Infill Development EA	17,719	924	14,892	823
Rock Point EDA Leasing and Exploratory Drilling EA	92,098	340	11,344	42
Saddletree Draw Leasing and Rock House Development EA	4,826	106	4,774	105
West Bonanza Area Natural Gas Well Development Project EA	24,813	608	1,070	26
West Tavaputs EIS	137,930	1,603	30,704	357
Past Developments and Current and Future Developments Not Covered by a Field Development NEPA Document				
729 abandoned wells[2,3]	NA4	NA	NA	3,565 acres
5,239 existing wells[2,3]	NA	NA	NA	19,158 acres
752 proposed well[3]	NA	NA	NA	2,377 acres
Field Development Proposals				
Greater Chapita Wells Natural Gas Infill Project EIS	40,027	3,696	31,741	2,931
Monument Butte Area Oil and Gas Development Project EIS	119,850	15,612	43,964	5,727
Randlett EDA Area Programmatic Leasing and Exploration Project	53,380	2,613	28,817	1,411

Total CIAA Disturbance from Oil and Gas				
	--	--	--	44,674 acres (8.3%)
Current Project				
Proposed Action	20.6	3.00	20.6	3.00
Fence Installation	20.6	~0.1	20.6	~0.1
No Action	NA	0	NA	0
Total CIAA Disturbance from Oil and Gas				
	--	--	--	44,677 acres (8.31%)

[1]Assumes surface disturbance was authorized evenly across the analysis area of the document.

[2]Uses the assumption contained within the Greater Uinta Basin Cumulative Impacts Technical Support Document.

[3]As of 4/8/2013

[4]NA = not applicable

Chapter 5. Tribes, Individuals, Organizations, or Agencies Consulted:

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[Describe consultation efforts here.]

Table 5.1. List of Persons, Agencies and Organizations Consulted

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
U.S. Fish and Wildlife Service	Formal Section 7 consultation for impacts to *Sclerocactus wetlandicus*was completed for Willow Creek Abandoned Mine Reclamation Project by the U.S. Fish and Wildlife Service and the Bureau of Land Management, Vernal Field Office.	On XX X, 2015 a Biological Opinion was received that concurred with the "*may affect, is likely to adversely affect*" determination for *Sclerocactus wetlandicus* (Uinta Basin hookless cactus).
SHPO	Consulted on as required by the American Indian Religious Freedom Act of 1978 (42 U.S.C. 1531)	

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Chapter 6. List of Preparers

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[Enter the Preparers List here.]

Table 6.1. List of Preparers

Name	Title	Responsible for the Following Section(s) of this Document
Rick Goshen	Geologist	Team Lead
See ID Team Checklist		

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Chapter 7. References

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REFERENCES

Bureau of Land Management (BLM). 2008. Resource Management Plan, BLM Vernal Field Office, Vernal, Utah.

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Appendix A. Interdisciplinary Team Checklist

Project Title: Willow Creek Abandoned Mine Reclamation Project

NEPA Log Number: DOI-BLM-UT-G010–2015–0125–EA

File/Serial Number:

Project Leader: Rick Goshen

DETERMINATION OF STAFF: (Choose one of the following abbreviated options for the left column)
NP = not present in the area impacted by the proposed or alternative actions
NI = present, but not affected to a degree that detailed analysis is required
PI = present with potential for relevant impact that need to be analyzed in detail in the EA
NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form. The Rationale column may include NI and NP discussions.

Determination	Resource/Issue	Rationale for Determination	Signature	Date
RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX 1 H-1790-1)				
NI	Air Quality & Greenhouse Gas Emissions	Emissions will occur from vehicles in the project area, but those impacts will be short term & transitory so they will not be detectable by monitors or models. No standards have been set by EPA or other regulatory agencies for greenhouse gases. In addition, the assessment of greenhouse gas emissions and climate change is still in its earliest stages of formulation. Global scientific models are inconsistent, and regional or local scientific models are lacking so that it is not technically feasible to determine the net impacts to climate due to greenhouse gas emissions. It is anticipated that greenhouse gas emissions associated with this action and its alternative(s) would be negligible.	Rick Goshen	6/03/2015
	BLM Natural Areas	None Present as per GIS layer review and RMP/ROD Review	Rene Arce	
	Cultural: Archaeological Resources	No cultural resources eligible for inclusion into the NRHP were identified within the APE of the proposed undertaking.	C.J. Truesdale	
	Cultural: Native American Religious Concerns	No known TCPs exist within the APE. The project will not hinder access to or use of Native American religious sites.	C.J. Truesdale	

Determination	Resource/Issue	Rationale for Determination	Signature	Date
	Designated Areas: Areas of Critical Environmental Concern	None Present as per GIS layer review and RMP/ROD Review	Rene Arce	
	Designated Areas: Wild and Scenic Rivers	None Present as per GIS layer review and RMP/ROD Review	Rene Arce	
	Designated Areas: Wilderness Study Areas	None Present as per GIS layer review and RMP/ROD Review	Rene Arce	
NI	Environmental Justice	No minority or economically disadvantaged communities or populations would be disproportionately adversely affected by the proposed action or alternatives because none are present in or adjacent to the project area.	Rick Goshen	6/03/2015
NP	Farmlands (prime/unique)	Prime or unique farmlands must be irrigated to be designated as such. None of the lands in the project area are irrigated, therefore there are no prime or unique farmlands in the project area.	Rick Goshen	6/03/2015
NI	Fuels/Fire Management	There are no past or planned Fuels projects in the area. The proposed disturbances may increase the chance of invasive species; primarily Bromus tectorum. Bromus tectorum can raise the frequency and rate of spreads of wildfires in the area. The proposed reclamation standards should minimize the potential for additional invasive species.	Blaine Tarbell	6/27/2015
NI	Geology/Minerals/Energy Production	No adverse impact to geology or mineral resources is expected in the project area per the Vernal Field Office RMP and GIS review.	Rick Goshen	7/8/2015
NI PI-Soils and Vegetation	Invasive Plants/Noxious Weeds, Soils & Vegetation	IP/NW: No noxious weeds have been previously documented in the Project Area per BLM GIS data review. Invasive species, including *Halogeton glomeratus*, are present, per 2012 surveys. The proposed disturbance would provide suitable habitat for the establishment and spread of non-native plant species. The applicant would control invasive species infestations in the Project Area. Soils: The proposed project takes place within soils mapped as Casmos-Cadrina Badland complex according to NRCS soil survey data. These soils are typically loamy, to channery loam all the way to bedrock. Depth to bedrock is typically 5–20 inches, they are well drained, high runoff potential because of the nature of channery loams, and can be slightly saline. Approximately 3 acres of new soil disturbance would occur during project	Christine Cimiluca Soils: James Hereford II	6/23/2015 Soils: 6/2 2015

Determination	Resource/Issue	Rationale for Determination	Signature	Date
		activities and these areas would remain disturbed until reclamation is successful. Soils would be re-contoured and reseeded during reclamation. Vegetation: There would be approximately 3 acres of initial vegetation disturbance/removal. Mitigation: In accordance with the Green River Reclamation Guidelines, compliance with requirements of the Guidelines will be a COA for all BLM authorizations within the jurisdiction of the Green River District Office. Compliance with the COA will prevent impacts to soils and vegetation and prevent the spread of Invasive and noxious weeds to the extent that detailed analysis is not necessary.		
	Lands/Access	The project, as proposed, will not modify any existing routes or ROWs. There are no conflicts with other land use authorizations.	Denise Ohler	
	Lands with Wilderness Characteristics (LWC)	None Present as per 2008 Vernal RMP ROD and GIS layer review	Rene Arce	
	Livestock Grazing & Rangeland Health Standards	The proposal is within the Wildhorse bench Allotment. This is an active sheep allotment. This proposal will remove < 1 Animal Unit Month of forage from this allotment and would be expected to reclaim within two growing seasons due to reseeding. The proposal is beneficial since the un-reclaimed area is negative to public land. It is not anticipated that this proposal would negatively impact grazing operations. There are no known range improvements that would be impacted by this proposal. Rangeland Health assessments were conducted in this allotment. It is anticipated that Standards and Guidelines are being met in this allotment. This proposal is not expected to affect Rangeland Health Standards in this allotment.	Tracey Hart	
NP	Paleontology	No fossils were found (BLM: McCormick, Heath)	Rick Goshen	7/8/2015

Determination	Resource/Issue	Rationale for Determination	Signature	Date
NI	Plants: BLM Sensitive	There is suitable habitat for the following UT BLM sensitive plant species in the Project Area, per BLM GIS data: sterile yucca (*Yucca sterilis*) and Graham's catseye (*Cryptantha grahamii*). A survey of the Project Area was completed in 2012; no suitable habitat for *Cryptantha grahamii* was present. Suitable habitat for *Yucca sterilis* is present in the Project Area; however, no plants were documented during the surveys. As no populations of this species are located in the vicinity of the project and given the clonal nature of the species, the potential for future colonization is considered negligible. Based on the survey results of the Project Area no impacts to BLM sensitive plant species would occur as a result of the Proposed Action.	Christine Cimiluca	6/23/2015
PI	Plants: Threatened, Endangered, Proposed, or Candidate	The proposed project is located within potential habitat for Uinta Basin hookless cactus. A survey of the Project Area was conducted in 2012. Cacti were documented within the survey buffers, with the nearest occurrence approximately 168 ft. from the Project Area.	Christine Cimiluca	6/23/2015
NP	Plants: Wetland/Riparian	No riparian sites are inventoried at or in the vicinity of the Project Area. Based on site visits to the area and confirmed by Field Office data from GIS information.	Christine Cimiluca	6/23/2015
	Recreation	Motorized use is designated as limited to designated roads and trails as per Vernal RMP 2008. The use of the area is primarily from the oil and gas industry; recreational use of ATV's is limited to existing routes only.	Rene Arce	
NI	Socio-Economics	No impact to the social or economic status of the county or nearby communities would occur from this project due to its small size in relation to ongoing development throughout the basin.	Rick Goshen	6/03/2015
	Visual Resources	VRM Class IV identified, project would meet class IV objectives.	Rene Arce	

Determination	Resource/Issue	Rationale for Determination	Signature	Date
NI	Wastes (hazardous/solid)	No chemicals subject to reporting under SARA Title III in amounts greater than 10,000 pounds would be used, produced, stored, transported, or disposed of annually in association with the project. Trash and other waste materials would be cleaned up and removed immediately after completion of operations. The pit liner would be trimmed or folded and buried so that it will not reemerge at a later date.	Rick Goshen	6/03/2015
	Water: Floodplains	No HUD inventoried or non-HUD inventoried flood plains would be disturbed by the reclamation of the abandoned mine site. This project is not expected to negatively impact flood plains.		
NI	Water: Groundwater Quality	Groundwater could be present at less than 50 ft below ground surface depending on the season. Filling in the hole with existing materials that were previously removed from the mine would not adversely impact the groundwater.	Rick Goshen	7/8/2015
	Water: Hydrologic Conditions (stormwater)	The proposed reclamation of the abandoned mine site would alter the topography of the area to a small degree and change surface water flow patterns. It is not expected that surface water or stormwater would be created to the level of concern for Clean Water Act Section 402 (stormwater) review. Reclamation would return the area to a near natural water flow pattern and reduce stormwater concerns.		
NP	Water: Surface Water Quality	There are no perennial surface waters in the proposed project area as per onsite investigations and GIS analysis.	James Hereford II	6/24/2015
	Water: Waters of the U.S.	Waters of the U.S. are not present per USGS topographic map and GIS data review		
	Wild Horses	No herd areas or herd management areas are present in the project area per BLM GIS database.	Dusty Carpenter	
	Wildlife: Migratory Birds (including raptors)	Avian species may be present during project activities; however, the project would not disturb raptors or migratory birds during nesting or nuptial activities. There is a documented golden eagle nest located 500-600 yards from the project area, but has been inactive for many years and the nest is falling apart. No impacts are anticipated.	Brandon McDonald	

Determination	Resource/Issue	Rationale for Determination	Signature	Date
	Wildlife: Non-USFWS Designated	In accordance with offices files and field reviews there are no wildlife species that would be impacted from project activities. Bats typically use mine shafts that are greater in size to regulate temperatures during roosting periods. No impacts are anticipated.	Brandon McDonald	
	Wildlife: Threatened, Endangered, Proposed or Candidate	In accordance with offices files and field reviews there are no threatened, endangered, or candidate species including their habitats (including sage-grouse PPH or PGH areas) within the project area. In addition, water depletion from the Colorado River system is not anticipated for this project.	Brandon McDonald	
	Woodlands/ Forestry	None Present per GIS database	Dave Palmer	

FINAL REVIEW:			
Reviewer Title	**Signature**	**Date**	**Comments**
Environmental Coordinator			
Authorized Officer			